

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (original): A magnetic actuator including a mobile magnetic portion (20), a fixed magnetic portion (10) provided with at least two attraction areas (11, 12) for the mobile magnetic portion (20), and means (30) for triggering the displacement of the mobile magnetic portion (20), the mobile magnetic portion (20) being in levitation when it is not in contact with an attraction area (11, 12), characterized in that the mobile magnetic portion (20) includes a magnet-based part (200) with reduced magnet weight, this part (200) having an overall volume, and a mass which is less than the one it would have if its overall volume was totally occupied by the magnet.

Claim 2 (original): The magnetic actuator according to claim 1, characterized in that the part (200) with reduced magnet weight includes one or more magnets (22, 24, 26) provided with at least one recess (21, 27).

Claim 3 (original): The magnetic actuator according to claim 2, characterized in that the recess (21) is a through hole.

Claim 4 (currently amended): The magnetic actuator according to ~~any of claims 2 or 3~~claim 2, characterized in that the recess (21) is filled with a solid material (25) with lesser density, less than that of the magnet (24).

Claim 5 (original): The magnetic actuator according to claim 4, characterized in that the lesser density solid material is selected from semiconducting material, plastic material, soft magnetic material, dielectric material.

Claim 6 (currently amended): The magnetic actuator according to ~~any of claims 2 or 3~~claim 2, characterized in that the recess (21) is empty of solid material.

Claim 7 (currently amended): The magnetic actuator according to ~~any of claims 1 to 6~~claim 1, characterized in that the part (200) with reduced magnet weight is a substantially rectangular plate.

Claim 8 (currently amended): The magnetic actuator according to ~~any of claims 1 to 7~~claim 1, characterized in that the part (200) with reduced magnet weight includes a magnet frame (24).

Claim 9 (currently amended): The magnetic actuator according to ~~any of claims 1 to 8~~claim 1, characterized in

that the part (200) with reduced magnet weight includes in the direction of the displacement, a succession of magnets (26) spaced apart from each other, these magnets (26) having a same magnetization orientation.

Claim 10 (currently amended): The magnetic actuator according to ~~any of claims 1 to 8~~claim 1, characterized in that the part (200) with reduced magnet weight includes in the direction of the displacement, an alternating succession of magnets (26) and of at least one solid portion (27) of lesser density.

Claim 11 (original): The magnetic actuator according to any of claims 9 or 10, characterized in that the magnets (26) are in the form of orientated bars substantially normal to the displacement.

Claim 12 (currently amended): The magnetic actuator according to any of claims 9 ~~to 11~~or 10, characterized in that the succession includes a magnet (26) at each end.

Claim 13 (original): The magnetic actuator according to claim 12, characterized in that the end magnets (26) have a dimension in the direction of the displacement, substantially equal to the displacement.

Claim 14 (currently amended): The magnetic actuator according to any of claims 9 ~~to 13~~ or 10, characterized in that the means (30) for triggering the displacement include at least one conductor (30) arranged as a meander formed with sections (30.1, 30.2) of successive conductors wherein a current is able to flow in opposite directions, each of the magnets (26) of the succession, when the mobile magnetic portion (20) is stuck on the attraction area (11, 12), cooperating with one of the sections (30.1 or 30.2), the current flowing in the same direction in these sections.

Claim 15 (currently amended): The magnetic actuator according to ~~any of claims 1 to 7~~ claim 1, characterized in that the part (200) with reduced magnet weight includes at least one central magnet (28) surrounded at least partially by at least one portion (29) of lesser density, this central magnet (28) being in the form of a substantially rounded or ovoid pad.

Claim 16 (currently amended): The magnetic actuator according to ~~any of claims 1 to 16~~ claim 1, characterized in that the mobile magnetic portion (20) includes at least one face (201a), which must come and stick on an attraction area (11, 12), this face (201a) being curved.

Claim 17 (currently amended): The magnetic actuator according to ~~any of claims 1 to 15~~claim 1, characterized in that the mobile magnetic portion (20) includes at least one face (205) which must come and stick on an attraction area (11, 12), this face being arranged as a zigzag.

Claim 18 (currently amended): The magnetic actuator according to ~~any of claims 1 to 17~~claim 1, characterized in that each attraction area (11, 12) has a geometry conjugate to that of the face (201a, 205) of the mobile magnetic portion (20) which must come into contact with it.

Claim 19 (currently amended): The magnetic actuator according to ~~any of claims 1 to 18~~claim 1, characterized in that at least one of the attraction areas (11) includes a dielectric portion (111) so as to achieve capacitive contact when the mobile magnetic portion (20) is stuck on said attraction area.

Claim 20 (currently amended): The magnetic actuator according to ~~any of claims 1 to 19~~claim 1, characterized in that the part, with reduced magnet weight includes a dielectric portion (29) so as to achieve capacitive contact when the mobile magnetic portion (20) is stuck on one of the attraction areas (11, 12).

Claim 21 (original): A method for making a magnetic actuator, characterized in that it includes the following steps:

on a first substrate (91, 93), making cases (51) capable of receiving magnets (3-1, 24) of a fixed magnetic portion and a part (200) with reduced magnet weight, of a mobile magnetic portion, this part (200) with reduced magnet weight having an overall volume, and a mass which is less than the one it would have if its overall volume was totally occupied by the magnet,

depositing magnets (3-1, 24) in the cases (51),

depositing a dielectric layer (54) and etching the latter to expose the part (200) with reduced magnet weight of the mobile magnetic portion and its surroundings up to the fixed magnetic part,

on a second substrate (92), making at least one case (55) capable of receiving a conductor for triggering a displacement of the mobile magnetic portion,

depositing the conductor (4-1) in the case (55),

assembling both substrates (91 or 93, 92) by putting them face to face,

totally or partially removing the first substrate (91, 93) so as to release the part (200) with reduced magnet weight from the mobile magnetic portion.

Claim 22 (original): The method according to claim 21, characterized in that it includes a step for magnetizing the magnet (24) of the part (200) with reduced magnet weight of the mobile magnetic portion and possibly of the fixed magnetic portion before releasing the part (200) with reduced magnet weight.

Claim 23 (currently amended): The method according to ~~any of claims 21 or 22~~claim 21, characterized in that the step for etching the dielectric layer (54) of the first substrate (91, 93) also aims at providing at least an aperture (46) for accessing at least one electric contact for supplying power to the conductor (4-1).

Claim 24 (original): The method according to claim 23, characterized in that the step for etching the dielectric layer (54) is followed by a step for etching the first substrate (91, 93) around the part (200) with reduced magnet weight and at the level of at least one portion (21) of lesser density, with which the part (200) with reduced magnet weight is provided.

Claim 25 (original): The method according to claim 23, characterized in that the step for etching the dielectric layer (54) is followed by a step for etching the first substrate (91, 93) around the part (200) with reduced

magnet weight by masking at least one portion (21) of lesser density with which the part (200) with reduced magnet weight is provided, this portion (21) of lesser density being full of the material of the substrate.

Claim 26 (currently amended): The magnetic actuator according to ~~any of claims 1 to 25~~claim 21, characterized in that it includes a step for achieving at least one electric contact (47) for supplying power to the conductor (4-1) on the second substrate (92) after depositing the conductor and before assembling both substrates (91 or 93, 92).

Claim 27 (currently amended): The magnetic actuator according to ~~any of claims 21 to 26~~claim 21, characterized in that it includes a step for depositing dielectric material (59) at the surface of the second substrate (92) before assembling both substrates (91 or 93, 92).

Claim 28 (currently amended): The magnetic actuator according to ~~any of claims 21 to 27~~claim 21, characterized in that the substrates are massive semiconducting or SOI type substrates (93).